AMENDMENTS TO THE CLAIMS

The **Listing of Claims**, will replace all prior versions, and listings, of claims in this application.

Listing of Claims:

1.-28. (Cancelled)

29. (Presently Amended) ~~The method of claim 23~~ A method for communicating information, comprising: allocating, for signal transmission, each of a plurality of frequency sub-bands of an ultra-wide band spectrum; sending an ultra-wide band transmission comprising the information over the ultra-wide band spectrum, comprising sending a signal over each of the plurality of sub-bands; and receiving the ultra-wide band transmission comprising the information over the ultra-wide band spectrum, comprising receiving the signals, wherein sending the ultra-wide band signal comprises: converting a first data signal containing information into one or more encoded signals using an Inverse Fast Fourier Transform; and converting the encoded signal into an encoded ultra-wide band signal comprising burst symbol cycles.

30. (Original) The method of claim 29, wherein sending the signals comprises sending a different waveform over each sub-band.

31. (Original) The method of claim 29, wherein sending the signals comprises sending more than one waveform over a single sub-band at a given time.

32. (Original) The method of claim 29, wherein sending the ultra-wide band signal comprises transmitting over only a single one of the sub-bands at a given time.

33. (Original) The method of claim 29 wherein sending the ultra-wide band signal comprises switching between sub-bands.

34. (Original) The method of claim 33, wherein the switching is performed after each symbol is transmitted.

35. (Original) The method of claim 33, wherein the switching is performed after several symbols are transmitted.

36. (Original) The method of claim 33, wherein the switching is performed after one or more symbols are transmitted and an OFF period.

37. (Original) The method of claim 36, wherein the OFF period is used to reduce power consumption in the receiver and transmitter.

38. (Original) The method of claim 29, wherein the narrowband signal comprises an OFDM signal with a cyclic prefix.

39. (Original) The method of claim 29, wherein the narrowband signal comprises an OFDM signal with a gap and/or cyclic prefix.

40. (Original) The method of claim 29, comprising performing energy collecting and/or inter carrier interference mitigation by at least one of using parallel receivers, providing a gap between the OFDM symbols, cyclic prefix and using the tail of the symbol generated by multi-path in the channel.

41. (Presently Amended) ~~The method of claim 23~~ A method for communicating information, the method comprising: allocating, for signal transmission, each of a plurality of frequency sub-bands of an ultra-wide band spectrum; sending an ultra-wide band transmission comprising the information over the ultra-wide band spectrum, comprising sending a signal over each of the plurality of sub-bands; and receiving the ultra-wide band transmission comprising the information over the ultra-wide band spectrum, comprising receiving the signals, wherein sending the ultra-wide band signal comprises: converting a first data signal containing information into one or more encoded signals using an Inverse Fast Fourier Transform; and converting the encoded signal into an encoded pulsed ultra-wide band signal.

42. (Original) The method of claim 41, wherein sending the signals comprises sending a different waveform over each sub-band.

43. (Original) The method of claim 41 wherein sending the signals comprises sending more than one waveform over a single sub-band at a given time.

44. (Original) The method of claim 41, wherein sending the ultra-wide band signal comprises transmitting over only a single one of the sub-bands at a given time.

45. (Original) The method of claim 41 wherein sending the ultra-wide band signal comprises switching between sub-bands in which pulses are transmitted.

46. (Original) The method of claim 45, wherein the switching is performed after each symbol is transmitted.

47. (Original) The method of claim 45, wherein the switching is performed after several symbols are transmitted.

48. (Original) The method of claim 45, wherein the switching is performed after one or more symbols are transmitted and an OFF period.

49. (Original) The method of claim 48, wherein the OFF period is used to reduce power consumption in the receiver and transmitter.

50. (Original) The method of claim 41, wherein the narrowband signal comprises an OFDM signal with a cyclic prefix.

51. (Original) The method of claim 41, wherein the narrowband signal comprises an OFDM signal with a gap and/or cyclic prefix.

52. (Original) The method of claim 41, comprising performing energy collecting and/or inter carrier interference mitigation by at least one of using parallel receivers, providing a gap between the OFDM symbols, cyclic prefix and using the tail of the symbol generated by multi-path in the channel.

53. (Original) The method of claim 41, comprising determining a bandwidth of each of a plurality of bands used by the second signal by a narrow pulse width.

54.- 80 (Cancelled)